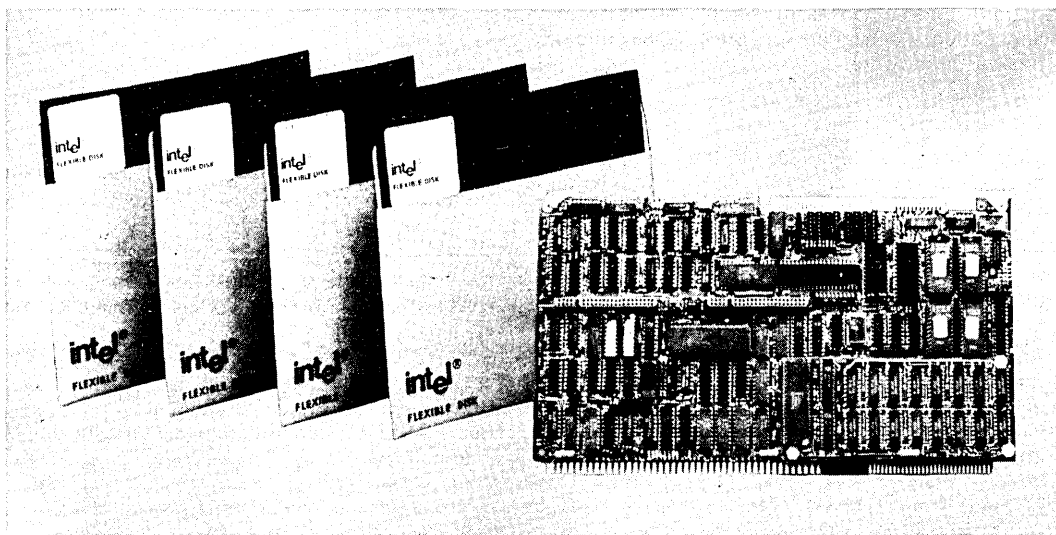




iMDX 557 iAPX Resident Processor Card Package

- High-Performance 8086-Based CPU Board for Increased Inteltec® Development System Performance and Improved iAPX 86/88 Development Environment
- Upgrades Inteltec® Series II and Model 800 Microcomputer Development Systems to the Functionality of Series III Systems
- 224K Bytes of User Program RAM Memory Available for iAPX 86/88 User Programs
- Software Applications Debugger for iAPX 86/88 User Programs
- Supports Full Range of iAPX 86/88-Resident, High-Level Languages: PL/M-86/88, PASCAL-86/88, and FORTRAN-86/88
- Includes iAPX 86/88-Resident Relocating Macro Assembler, Linker, Locator, and Librarian
- Dual Processor Disk Operating System Software with 16-bit AEDIT Editor
- Supports PSCOPE™ Advanced 86/88 Software Debugger

The iMDX 557 is a performance enhancement package for Inteltec® Series II and Model 800 Development Systems, specifically designed for iAPX 86/88 microprocessor development. The iMDX 557 includes an iAPX-based CPU board with 256K RAM memory, CRT-based menu-driven editor, iAPX 86/88-Resident Relocating Macro Assembler, Linker, Locator and Librarian, software applications debugger for iAPX 86/88 user programs, and complete user documentation. The DX-557I kit includes an iMDX 557 plus an IPC-85.



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FUNCTIONAL DESCRIPTION

Hardware Components

Resident Processor Card RPC-86 - The heart of the RPC-86 is an Intel 8086-2 16-bit HMOS microprocessor, running at 8.0 MHz. There are 128K bytes of RAM memory provided on the board, with transparent refresh from the Intel 8203 dynamic RAM controller. There are 16K bytes of ROM on the board, preprogrammed with an iAPX 86/88 applications debugger. The debugger provides features necessary to debug and control execution of applications software for the iAPX 86/88 microprocessors. The 8086 and the host processor use interrupts for interprocessor communications.

RAM Multi-Module - The module contains an additional 128K bytes of read/write RAM memory. Refresh hardware is provided on-board for all the dynamic memory elements. Data buffering occurs for all data written to or read from the memory array. The RPC-86 board with the RAM multi-module occupies two slots in the Inteltec cardcage.

SYSTEM FEATURES

The iMDX 557 offers many key advantages for iAPX 86/88 applications and Inteltec Development Systems: enhanced system performance through a dual-host CPU environment, a full spectrum of iAPX 86/88-resident high-level languages, expanded user program space for iAPX 86/88 programs, and a powerful high-level software applications debugger for iAPX 86/88 microprocessor software.

Dual-Host CPU

The addition of a 16-bit 8086 to the existing 8-bit host CPU increases iAPX 86/88 compilation speeds and provides for iAPX 86/88 code execution. When the 8086 is executing a program, the 8-bit CPU off-loads all I/O activity and operates as an intelligent I/O controller to double buffer data to and from the 8086. The 8086 also provides an execution vehicle for 8086 and 8088 object code. An added benefit of two-host microprocessors is that 8-bit translations and applications are available in the same system. This feature provides complete compatibility for current systems and means that software running on current In-

teltec Development Systems will run on the new system.

High-Level Languages for iAPX 86/88

The iMDX 557 allows the current Inteltec system user to take advantage of a breadth of new resident iAPX 86/88 high-level languages: PL/M 86/88, PASCAL 86/88, and FORTRAN 86/88. The iAPX 86/88 resident Macro assembler and these high-level language compilers execute on the host CPU, thereby increasing system performance.

Extended Program Memory

By adding an iMDX 557 to an existing Inteltec Development System, 224K bytes of user program RAM memory are made available for iAPX 86/88 programs. System memory can be expanded by adding RAM memory boards. This, combined with the dual-host CPU system architecture, dramatically increases the processing power of the system.

Software Applications Debugger

The RPC-86 contains the applications debugger which allows iAPX 86/88 programs to be developed, tested, and debugged within the Inteltec system. The debugger provides a subset of in-circuit emulator commands such as symbolic debugging, control structures and compound commands specifically oriented toward software debugging needs.

ALTER™ Editor

This 16-bit based, menu-driven, full-screen editor is included with the iMDX 557. Designed for the programmer, it has features that allow easy code generation and fast, convenient program alteration.

SPECIFICATIONS

Resident Processor Card (RPC-86):
8086-based, operating at 8.0 MHz with 128K RAM memory module
RAM - 256K bytes on the CPU board including the 128K RAM multi-module
ROM - 16K bytes (applications debugger)
Bus - MULTIBUS architecture; 8.0 MHz maximum transfer rate

Electrical Characteristics

DC Power Supply

Voltage Requirements	Current Requirements (Amperes Max.)
+ 5 ± 5% Volts	5.6 A
+ 12 ± 5% Volts	25 mA
- 12 ± 5% Volts	23 mA

Environmental Characteristics (constrained by Series II mainframe)

Operating Temperature: 10° to 35° C (50° to 95° F)
Relative Humidity: To 20% to 80% (non-condensing)

Equipment Supplied

iAPX 86 Resident Processor Card (RPC-86) with
128K Byte RAM Multi-module
Self-test Diagnostics
iAPX 86/88 Applications Debugger
iAPX 86/88 Resident Macro Assembler and
Utilities
AEDIT Text Editor

DOCUMENTS SUPPLIED

A Guide to Intellec Series III Microcomputer Development Systems, 121632

Intellec Series III Microcomputer Development System Product Overview, 121575

Intellec Series III Microcomputer Development System Console Operating Instructions, 121609

Intellec Series III Microcomputer Development System Pocket Reference, 121610

Intellec Series III Microcomputer Development System Programmers Reference, 121618

iAPX 86,88 Family Utilities User's Guide for 8086-Based Development Systems, 121616

An Introduction to ASM86, 121689

ASM86 Reference Manual for 8086-Based Development Systems, 121703

8086/8087/8088/80186 Macro Assembler Language Pocket Reference, 121674

8086/8087/8088/80186 Macro Assembler Operating

Instructions for 8086-Based Development Systems, 121628

MCS-86 Assembly Language Converter Operator Instructions, 9800642

Model 557 Installation Manual, 122015

MCS-80/85 Utilities User's Guide, 121617

iAPX 86,88 Family Utilities Pocket Reference, 121669

iAPX 86,88 User's Manual, 210201

iAPX 88 Book, 210200

AEDIT (CRT-Based Text Editor) User's Guide

AEDIT (CRT-Based Text Editor) Pocket Reference

Additional manuals may be ordered from any Intel sales representative or distributor office, or from Intel Literature Department, 3056 Bowers Avenue, Santa Clara, California 95051.

ORDERING INFORMATION

Part Number Description

IMDX 557 Performance upgrade package for Intellec Series II/85 and Model 800 Microcomputer Development Systems (110V/60 Hz or 220V/50Hz). Specifically designed for iAPX 86/88 microprocessor development. Upgrades Intellec Series II models to Intellec Series III Development Systems.

DX-557I Kit Performance upgrade package for Intellec Series II/80 Microcomputer Development Systems. Specifically designed for iAPX 86/88 microprocessor development. The 557I package consists of the IMDX 557 software and hardware performance package and the integrated 8085 processor board (IPC-85). This upgrade package is only for Intellec Series II/80 Development Systems (110V/60 Hz or 220V/50 Hz) and upgrades these models to the full performance and functionality of an Intellec Series III Development System.